

CLAIMS

1. Promoter region having specificity for the plant epidermis, comprising a first sequence originating from the promoter of the gene GSTA1 and a second sequence originating from the intron of the gene WIR1a.

2. Promoter region according to claim 1,
characterized in that the first sequence is SEQ ID No. 1 and the second sequence is SEQ ID No. 2.

3. Promoter region according to claim 1 or 2,
characterized in that it is selected from the group consisting of

- a) promoter regions comprising the nucleic acid sequence given in SEQ ID No. 3,
- b) promoter regions comprising a functional part of the nucleic acid sequence given in SEQ ID No. 3, and
- c) promoter regions having a sequence, which hybridizes under stringent conditions with the nucleic acid sequence given in SEQ ID No. 3.

4. Chimeric gene,
characterized in that it contains a promoter region according to any of the claims 1 to 3 in operative linkage with a coding sequence.

5. Chimeric gene according to claim 4,
characterized in that its expression results in an increased yield of the protein encoded by the coding sequence in the epidermis.

6. Chimeric gene according to claim 4 or 5,
characterized in that the coding region originates from a resistance gene.

7. Chimeric gene or recombinant nucleic acid molecule according to claim 5 or 6,
characterized in that the coding sequence encodes a peroxidase or an oxalate oxidase.

8. Chimeric gene according to claim 4,

characterized in that its expression suppresses the expression of the corresponding endogenous gene in the epidermis.

9. Chimeric gene according to claim 8,
characterized in that the coding sequence is in antisense orientation.

10. Chimeric gene according to claim 8,
characterized in that the suppression of the expression of the endogenous gene results from RNA-interference.

11. Chimeric gene according to any of the claims 8 to 10,
characterized in that the gene whose expression is suppressed is the Mlo-gene.

12. Recombinant nucleic acid molecule, comprising a promoter region according to any of the claims 1 to 3 or a chimeric gene according to any of the claims 4 to 11.

13. Recombinant nucleic acid molecule according to claim 12, further comprising transcription termination sequences.

14. Method for generating transgenic plants with epidermis specific expression of a transgene, comprising the steps:

- a) generating a recombinant nucleic acid molecule according to claim 12 or 13,
- b) transferring the recombinant nucleic acid molecule from a) to plant cells and
- c) regenerating entirely transformed plants and, if desired, propagating the plants.

15. Transgenic plants, containing a recombinant nucleic acid molecule according to claim 12 or 13 or generated according to a method according to claim 14, as well as transgenic parts of said plants and their transgenic propagation material, like protoplasts, plant cells, calli, seeds, tubers or cuttings, as well as the transgenic offspring of said plant.

16. Transgenic plants according to claim 15, wherein said plants are monocotyledonous plants.

17. Transgenic plants according to claim 16, wherein said plants are poaceae.
18. Transgenic plants according to claim 17, wherein said plants are wheat or barley.
19. Use of a promoter region according to one of the claims 1 to 3 for epidermis specific expression of transgenes in plants.
20. Use according to claim 19, wherein the transgene is a resistance gene.
21. Method for increasing the pathogen resistance in transgenic plants, comprising the steps:
 - a) generating a recombinant nucleic acid molecule according to claim 12 or 13,
 - b) transferring the recombinant nucleic acid molecule from a) to plant cells and
 - c) regenerating entirely transformed plants and, if desired, propagating said plants.
22. Transgenic plants with increased pathogen resistance, containing a recombinant nucleic acid molecule according to one of the claims 12 to 13 or generated according to a method according to claim 21, as well as transgenic parts of said plants and their transgenic propagation material, like protoplasts, plant cells, calli, seeds, tubers or cuttings, as well as the transgenic offspring of said plant.
23. Transgenic plants according to claim 22, wherein said plants are monocotyledonous plants.
24. Transgenic plants according to claim 23, wherein said plants are poaceae.
25. Transgenic plants according to claim 24, wherein said plants are wheat or barley.
26. Transgenic plants according to any of the claims 22 to 25,
characterized in that they exhibit an increased resistance against mildew.